

# Balancing Chemical Equations

1. \_\_\_\_ Cu(s) + \_\_\_\_ O<sub>2</sub>(g) → \_\_\_\_ CuO(s)
2. \_\_\_\_ H<sub>2</sub>O(l) → \_\_\_\_ H<sub>2</sub>(g) + \_\_\_\_ O<sub>2</sub>(g)
3. \_\_\_\_ Fe(s) + \_\_\_\_ H<sub>2</sub>O(g) → \_\_\_\_ H<sub>2</sub>(g) + \_\_\_\_ Fe<sub>3</sub>O<sub>4</sub>(s)
4. \_\_\_\_ AsCl<sub>3</sub>(aq) + \_\_\_\_ H<sub>2</sub>S(aq) → \_\_\_\_ As<sub>2</sub>S<sub>3</sub>(s) + \_\_\_\_ HCl(aq)
5. \_\_\_\_ CuSO<sub>4</sub>•5H<sub>2</sub>O(s) → \_\_\_\_ CuSO<sub>4</sub>(s) + \_\_\_\_ H<sub>2</sub>O(g)
6. \_\_\_\_ Fe<sub>2</sub>O<sub>3</sub>(s) + \_\_\_\_ H<sub>2</sub>(g) → \_\_\_\_ Fe(s) + \_\_\_\_ H<sub>2</sub>O(l)
7. \_\_\_\_ CaCO<sub>3</sub>(s) → \_\_\_\_ CaO(s) + \_\_\_\_ CO<sub>2</sub>(g)
8. \_\_\_\_ Fe(s) + \_\_\_\_ S<sub>8</sub>(s) → \_\_\_\_ FeS(s)
9. \_\_\_\_ H<sub>2</sub>S(aq) + \_\_\_\_ KOH(aq) → \_\_\_\_ HOH(l) + \_\_\_\_ K<sub>2</sub>S(aq)
10. \_\_\_\_ NaCl(l) → \_\_\_\_ Na(l) + \_\_\_\_ Cl<sub>2</sub>(g)
11. \_\_\_\_ Al(s) + \_\_\_\_ H<sub>2</sub>SO<sub>4</sub>(aq) → \_\_\_\_ H<sub>2</sub>(g) + \_\_\_\_ Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>
12. \_\_\_\_ H<sub>3</sub>PO<sub>4</sub>(aq) + \_\_\_\_ NH<sub>4</sub>OH(aq) → \_\_\_\_ HOH(l) + \_\_\_\_ (NH<sub>4</sub>)<sub>3</sub>PO<sub>4</sub>(aq)
13. \_\_\_\_ C<sub>3</sub>H<sub>8</sub>(g) + \_\_\_\_ O<sub>2</sub>(g) → \_\_\_\_ CO<sub>2</sub>(g) + \_\_\_\_ H<sub>2</sub>O(l)
14. \_\_\_\_ Al(s) + \_\_\_\_ O<sub>2</sub>(g) → \_\_\_\_ Al<sub>2</sub>O<sub>3</sub>(s)
15. \_\_\_\_ CH<sub>4</sub>(g) + \_\_\_\_ O<sub>2</sub>(g) → \_\_\_\_ CO<sub>2</sub>(g) + \_\_\_\_ H<sub>2</sub>O(l)
16. \_\_\_\_ KNO<sub>3</sub> → \_\_\_\_ KNO<sub>2</sub> + \_\_\_\_ O<sub>2</sub>
17. \_\_\_\_ CaC<sub>2</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ Ca + \_\_\_\_ CO<sub>2</sub>
18. \_\_\_\_ C<sub>5</sub>H<sub>12</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ CO<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O
19. \_\_\_\_ K<sub>2</sub>SO<sub>4</sub> + \_\_\_\_ BaCl<sub>2</sub> → \_\_\_\_ KCl + \_\_\_\_ BaSO<sub>4</sub>
20. \_\_\_\_ KOH + \_\_\_\_ H<sub>2</sub>SO<sub>4</sub> → \_\_\_\_ K<sub>2</sub>SO<sub>4</sub> + \_\_\_\_ H<sub>2</sub>O
21. \_\_\_\_ Ca(OH)<sub>2</sub> + \_\_\_\_ NH<sub>4</sub>Cl → \_\_\_\_ NH<sub>4</sub>OH + \_\_\_\_ CaCl<sub>2</sub>
22. \_\_\_\_ C + \_\_\_\_ SO<sub>2</sub> → \_\_\_\_ CS<sub>2</sub> + \_\_\_\_ CO
23. \_\_\_\_ Mg<sub>3</sub>N<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O → \_\_\_\_ Mg(OH)<sub>2</sub> + \_\_\_\_ NH<sub>3</sub>
24. \_\_\_\_ V<sub>2</sub>O<sub>5</sub> + \_\_\_\_ Ca → \_\_\_\_ CaO + \_\_\_\_ V
25. \_\_\_\_ Na<sub>2</sub>O<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O → \_\_\_\_ NaOH + \_\_\_\_ O<sub>2</sub>
26. \_\_\_\_ Fe<sub>3</sub>O<sub>4</sub> + \_\_\_\_ H<sub>2</sub> → \_\_\_\_ Fe + \_\_\_\_ H<sub>2</sub>O
27. \_\_\_\_ Cu + \_\_\_\_ H<sub>2</sub>SO<sub>4</sub> → \_\_\_\_ CuSO<sub>4</sub> + \_\_\_\_ H<sub>2</sub>O + \_\_\_\_ SO<sub>2</sub>
28. \_\_\_\_ Al + \_\_\_\_ H<sub>2</sub>SO<sub>4</sub> → \_\_\_\_ H<sub>2</sub> + \_\_\_\_ Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>
29. \_\_\_\_ Si<sub>4</sub>H<sub>10</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ SiO<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O
30. \_\_\_\_ NH<sub>3</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ N<sub>2</sub>H<sub>4</sub> + \_\_\_\_ H<sub>2</sub>O
31. \_\_\_\_ C<sub>15</sub>H<sub>30</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ CO<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O
32. \_\_\_\_ BN + \_\_\_\_ F<sub>2</sub> → \_\_\_\_ BF<sub>3</sub> + \_\_\_\_ N<sub>2</sub>
33. \_\_\_\_ CaSO<sub>4</sub>•2H<sub>2</sub>O + \_\_\_\_ SO<sub>3</sub> → \_\_\_\_ CaSO<sub>4</sub> + \_\_\_\_ H<sub>2</sub>SO<sub>4</sub>
34. \_\_\_\_ C<sub>12</sub>H<sub>26</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ CO<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O
35. \_\_\_\_ C<sub>7</sub>H<sub>6</sub>O<sub>3</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ CO<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O
36. \_\_\_\_ Na + \_\_\_\_ ZnI<sub>2</sub> → \_\_\_\_ NaI + \_\_\_\_ Zn
37. \_\_\_\_ HBrO<sub>3</sub> + \_\_\_\_ HBr → \_\_\_\_ H<sub>2</sub>O + \_\_\_\_ Br<sub>2</sub>
38. \_\_\_\_ Al<sub>4</sub>C<sub>3</sub> + \_\_\_\_ H<sub>2</sub>O → \_\_\_\_ Al(OH)<sub>3</sub> + \_\_\_\_ CH<sub>4</sub>
39. \_\_\_\_ Ca(NO<sub>3</sub>)<sub>2</sub>•3H<sub>2</sub>O + \_\_\_\_ LaC<sub>2</sub> → \_\_\_\_ Ca(NO<sub>3</sub>)<sub>2</sub> + \_\_\_\_ La(OH)<sub>2</sub> + \_\_\_\_ C<sub>2</sub>H<sub>2</sub>
40. \_\_\_\_ CH<sub>3</sub>NO<sub>2</sub> + \_\_\_\_ Cl<sub>2</sub> → \_\_\_\_ CCl<sub>3</sub>NO<sub>2</sub> + \_\_\_\_ HCl
41. \_\_\_\_ Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> + \_\_\_\_ SiO<sub>2</sub> + \_\_\_\_ C → \_\_\_\_ CaSiO<sub>3</sub> + \_\_\_\_ CO + \_\_\_\_ P
42. \_\_\_\_ Al<sub>2</sub>C<sub>6</sub> + \_\_\_\_ H<sub>2</sub>O → \_\_\_\_ Al(OH)<sub>3</sub> + \_\_\_\_ C<sub>2</sub>H<sub>2</sub>
43. \_\_\_\_ NaF + \_\_\_\_ CaO + \_\_\_\_ H<sub>2</sub>O → \_\_\_\_ CaF<sub>2</sub> + \_\_\_\_ NaOH
44. \_\_\_\_ LiH + \_\_\_\_ AlCl<sub>3</sub> → \_\_\_\_ LiAlH<sub>4</sub> + \_\_\_\_ LiCl
45. \_\_\_\_ CaF<sub>2</sub> + \_\_\_\_ H<sub>2</sub>SO<sub>4</sub> + \_\_\_\_ SiO<sub>2</sub> → \_\_\_\_ CaSO<sub>4</sub> + \_\_\_\_ SiF<sub>4</sub> + \_\_\_\_ H<sub>2</sub>O
46. \_\_\_\_ CaSi<sub>2</sub> + \_\_\_\_ SbCl<sub>3</sub> → \_\_\_\_ Si + \_\_\_\_ Sb + \_\_\_\_ CaCl<sub>2</sub>
47. \_\_\_\_ TiO<sub>2</sub> + \_\_\_\_ B<sub>4</sub>C + \_\_\_\_ C → \_\_\_\_ TiB<sub>2</sub> + \_\_\_\_ CO
48. \_\_\_\_ NH<sub>3</sub> + \_\_\_\_ O<sub>2</sub> → \_\_\_\_ NO + \_\_\_\_ H<sub>2</sub>O
49. \_\_\_\_ SiF<sub>4</sub> + \_\_\_\_ NaOH → \_\_\_\_ Na<sub>4</sub>SiO<sub>4</sub> + \_\_\_\_ NaF + \_\_\_\_ H<sub>2</sub>O
50. \_\_\_\_ NH<sub>4</sub>Cl + \_\_\_\_ CaO → \_\_\_\_ NH<sub>3</sub> + \_\_\_\_ CaCl<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O
51. \_\_\_\_ NaPb + \_\_\_\_ C<sub>2</sub>H<sub>5</sub>Cl → \_\_\_\_ Pb(C<sub>2</sub>H<sub>5</sub>)<sub>4</sub> + \_\_\_\_ Pb + \_\_\_\_ NaCl
52. \_\_\_\_ Be<sub>2</sub>C + \_\_\_\_ H<sub>2</sub>O → \_\_\_\_ Be(OH)<sub>2</sub> + \_\_\_\_ CH<sub>4</sub>
53. \_\_\_\_ NpF<sub>3</sub> + \_\_\_\_ O<sub>2</sub> + \_\_\_\_ HF → \_\_\_\_ NpF<sub>4</sub> + \_\_\_\_ H<sub>2</sub>O
54. \_\_\_\_ NO<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O → \_\_\_\_ HNO<sub>3</sub> + \_\_\_\_ NO